Title

The Effect of Electronic Portfolios on Promoting Egyptian EFL College Students' Writing Competence and Autonomy

Author

Ahmed Mahmoud Aliweh

Tanta University, Egypt

Bio Data:

Ahmed Mahmoud Aliweh earned his Ph.D. from the State University of new York at Buffalo. From 1991-2000, he worked at Imam University, Saudi Arabia. He also taught at Sultan Qabous University for two semesters. His interests include online learning, intercultural communication, writing, and strategic competences.

Abstract

As a response to the ongoing developments in Egyptian Higher Education which call for the implementation of more innovative technology-assisted methods of teaching, and out of the universal paradigm shift that emphasises learner autonomy and perceives learning as a lifelong process, this study examines the effects of electronic portfolios, as a non-traditional tool, on enhancing Egyptian EFL college students' writing competence and autonomy. The study was conducted on sixty fourth year college students (23 males and 37 females). The participants were randomly assigned to either an experimental group, or a control group, of 30 students each. Whereas members of the control group developed traditional paper portfolios, members of the experimental group used the Internet and online resources to develop and present the same essay portfolios. Two instruments were developed and used to assess the impact

of the electronic portfolio: a) the Writing Competence Rating Scale; and b) the Learning Autonomy Scale. Results of the ANCOVA analysis reveal that online portfolios did not yield significant effects on students' writing competence and learning autonomy due to the interference of various extraneous variables which are the least controllable in online research. Further interpretations and study limitations were discussed.

Keywords: Electronic Portfolios, Writing Competence, Learning Autonomy

Introduction

As we move forward through this rapidly evolving information age, the integration of information and communication technologies into education has become "an imperative" (Warchauer, 2002; p. 455). Therefore, electronic literacy (mastery of basic technology skills) has become a prerequisite for college graduates in this era. Without necessary electronic competence, these graduates "will find themselves at a disadvantage educationally and occupationally" (Seaman, Wilkinson, and Buboltz, 2001; p. 87). As such, there is an overwhelming demand for the incorporation of modern technologies into education at all levels. This is most evident in higher education where many institutions around the globe are racing toward the incorporation of online courses into the curricula of various academic fields (Desai and Loso, 2003). Thus, many institutions have begun "to enrich their once interpersonal lecture classes using e-mails, discussion groups, and personal web pages" (St-Pierre, 2001; p. 96).

Obviously, this is due to the acknowledged potential of the information-rich environment instructional technologies offer for education. In fact, these technologies

"have opened new avenues for assisting both teachers and learners" (Dixon and Johnson, 2001; p. 40). Among other benefits, modern technologies offer easy access to a plethora of data through various means, especially the World Wide Web. Also, information and communication technologies have facilitated interaction between teachers and learners through both synchronous and asynchronous channels. Consequently, this has helped learning and instruction to surpass the limitation of time and space.

Clearly, the impact of information and communication technologies on education "is certainly felt at all levels, from preschool to the college arena" (Seeman, et. al., 2001; p. 81). Consequently, technology has become "an important factor of change in education" (Alvarez and Rico, 2006; p. 13), and, as Cambiano, et. al., (2001) aptly put it, education today "is searching for a new meaning for the teaching and learning process" (p. 21).

This vivid influence encompasses both teachers and learners who have to "modify their epistemologies to construct knowledge with and from more robust modes of representation" (Dickenson, 2001; p. 39). Thus, the influence of technology in education is manifested in the shift toward adopting new forms of course delivery which conceptualise learners as knowledge creators, rather than as passive recipients. Accordingly, the roles of both the teacher and the learner have drastically changed and the authoritarian relationship has given way to a more democratic, humanistic, and constructivist orientation where the two sides act as partners.

Clearly, education in Egypt is not immune to the strong influences which technologies have brought to other educational systems worldwide. This change has been manifested by the officially announced policy of the Ministry of Higher Education to implement drastic measures which aim at bringing about educational

reform in various institutions throughout the country. In fact, the ongoing reform policy has two characteristics: First, the shift toward multi-modal electronic resources which aims to replace the obsolete paradigm characterized by mono-source textbook curricula, domineering lecturers, and passive recipient learners. Of course, this necessitates the incorporation of modern instructional media; especially computer facilities, which help maximize students' learning potential. Second, at the heart of this reform policy lies the focus on student-centred approaches and practices which aim at achieving greater learner autonomy. Obviously, this objective has a high priority in order for students to take the initiative in their own learning and acquire the critical thinking skills necessary for academic life.

In line with the ongoing developments in Egyptian Higher Education which aim at the implementation of more innovative technology-assisted methods of teaching that help foster learners' autonomy, and out of the universal "paradigm shift from teacher-centred to learner-centred instruction" which sees learning as "a lifelong process rather than something done to prepare for the exam" (Jacobs and Farrell, 2001), this study attempts to assess the potential of electronic portfolios as a "non-traditional tool that "seems to show the greatest promise in enhancing diverse dimensions of learning and in promoting learners' autonomy" (Chen, 2006; p.69).

In fact, electronic portfolios provide both teachers and parents with an accessible archive of authentic work which manifests students' "deep learning" and "ownership" of the tasks. Moreover, electronic portfolios can offer a structure for students "to reflect systematically over time on the learning process and to develop the aptitude, skills, and habits that come from reflection" (Zubizarreta, 2004; p. 15).

Also, electronic portfolios can help promote writing competence. In order to successfully complete their portfolios, learners experience various self-engaging

activities through which they become active participants in the writing process; students are held accountable for topic selection, development, reflection, organization, as well as publishing. As such, electronic portfolios have the potential of enhancing students' writing competence. However, research exploring the use of electronic portfolios for developing writing is quite scarce (Song and August, 2002, Ushioda and Ridley, 2002, Sullivan, 2004, Barrett, 2005a, and Barrett, 2008). As such, many researchers recommend the use of this technology-based tool so that it can be later affirmed through research whether or not the educational objectives to which reformers aspire are actually being attained. To cite one, Barrett (2005b) states that "the time is right to study the potential of electronic portfolios to engage students in active participation in assessing and managing their own learning" (p. 23). To be more specific, she calls for an examination of the role of electronic portfolios in supporting student learning, engagement, and collaboration in order to better understand what works, especially with adolescent learners and their teachers. Therefore, investigating the impact of this new medium is needed "to record evidence of students' progress toward meeting standards (Barrett, 2005b; p. 7). Thus, through more informative research on the use of electronic portfolios, "we can realize the true potential of using technology to both improve and showcase student achievement across the curriculum" (Barrett, 2008; p.10). As a response to such research calls, this study attempts to examine the potential of electronic portfolios for enhancing students' writing competence and autonomy.

Background

This section sheds light on the fundamental concepts relevant to portfolio design and implementation in the educational arena. Specifically, it highlights basic issues such

as portfolio definitions, purposes, components, and advantages, as well as the major distinctive features of the electronic portfolio. It also reviews previous research relevant to the use of electronic portfolios in foreign language programs.

The Electronic Portfolio

According to the National Learning Infrastructure Initiative (2003, cited in Barrett, 2005a), the electronic portfolio is:

"A collection of authentic and diverse evidence, drawn from a large archive representing what a person or organization has learned over time, on which the person or organization has reflected and designed for presentation to one or more audiences for a particular rhetorical purpose".

An electronic portfolio makes use of modern technologies to create and publish a document that a certain audience can access and read through the computer. Also, through electronic technologies, students and teachers can collect and organize portfolio artifacts into various types (e.g. audio, video, graphics, and text). Moreover, they can use hypertext links to organize the material and include evidence of accomplishing appropriate outcomes, goals or standards.

Electronic portfolios have several advantages: 1) organizational flexibility, 2) display flexibility, 3) ability to connect content to standards, and 4) use of communication tools, (Davies, 2002; p. 2). Besides, electronic portfolios require minimal storage space and, therefore, students do not need massive storage systems. Also, electronic portfolios can be easily accessed by prospective employers online. In addition, electronic portfolios can contain multiple media; e.g., visual, audio, and text. Furthermore, electronic portfolios are easy to upgrade; their content may be updated from time to time to fit students' needs, interests and objectives throughout the

course. And finally, electronic portfolios allow cross-referencing of student work through hyperlinks (Ali, 2005).

Portfolio Components

According to Barrett (2005b), a portfolio has three general components; content, process, and purpose. These are described below:

1) The content includes the evidence (the learner's artefacts and reflections). An example might be writing samples, assignments, or activities undertaken over time and selected to showcase students' writing proficiency development.

2) The process includes the tools used, the sequence of activities, the rules set by the institution, the reflections constructed by the learner, the evaluation criteria, etc.

3) The purpose refers to the reasons for which this tool was developed. A portfolio could have various purposes; assessment, learning, professional development, and marketing etc.

Yet, based on the portfolio purpose, educators give a special emphasis to the following two types:

a) Assessment (Summative) Portfolios

The focus here is on the product or outcomes exemplified in documents aggregated over time to meet the expectations of a particular institution as in the case of graduation or certification. Thus, assessment portfolios reflect "the viewpoint of the evaluator" (Darling, 2001; p. 108), and as such, students perceive these portfolios as "something done to them rather than something they want to maintain as a lifelong learning tool" (Barrett, 2005a). In other words, the learners do not seem to have the strong sense of learning ownership.

b) Learning (Formative) Portfolios

The major purpose of this type is to foster learning and document growth over time. Unlike the previous type, the focus is on the process of learning. In other words, this tool "embodies the pains students experienced throughout the journey of recording, reflecting, and analysing their documents" (Darling, 2001; p. 108). Therefore, the items included reflect learners' perspectives, not outside standards and, as a result, students develop a strong sense of ownership as this tool turns to be "a story told by the learner's own voice" (Barrett, 2005a).

Previous Studies

A review of relevant literature reveals that most empirical studies which investigated the incorporation of electronic portfolios in various educational domains have focussed mainly on using this tool for assessment. To cite a few, Cambiano, Fernandez, and Martinez (2001) administered a survey on 58 college students in order to examine how they differ in 1) the process of developing and conducting traditional and electronic portfolios, 2) methodology, and 3) evaluation. Study findings indicated significant differences between the experimental and control groups in the processes of developing and conducting traditional and online portfolios. On the other hand, no significant differences were reported on methodology and evaluation. Though this study stopped short of elaborating on these differences, it concluded that "electronic portfolios can be used to visualize students' performance and certify their progress. They can be utilized as tools for teaching, learning, and evaluation" (p. 24).

Also, Wilson, Wright, and Stallworth (2003) found that students prefer using electronic portfolios to self evaluate their conceptional knowledge and show their ability to connect learning. As a result of assessment through electronic portfolios, students became more engaged and their personal theories, beliefs, and practices came

together in a cohesive bond. Students reported that portfolios provided them with the opportunity to showcase their artifacts and bear responsibility for their learning.

Brown (2004) used online surveys to identify graduate students' responses to the electronic portfolio assessment. His study showed that authentic assessment through electronic portfolios was useful for facilitating reflective thinking that resulted in self-regulated learning. Therefore, he concluded that electronic portfolio assessment is not only a valid measure of skill and concept attainment, but is also a reliable tool for predicting future career performance.

Wickersham and Chambers (2006) conducted a study on 26 graduate students (majoring in secondary education) in order to identify the effective strategies that can be utilized to design and develop electronic portfolios for the assessment of learning. After three semesters of implementation, a survey was administered to explore students' perceptions concerning the benefits and challenges of electronic portfolios as assessment tools. Data analysis revealed that there has been an overall continual improvement for items within three learning outcomes; 1) organizational skills, 2) self-knowledge, and 3) knowledge and skills transfer. Moreover, this authentic assessment tool helped students promote reflection and self efficacy. Through journaling exercises, the participants were better able to express their ideas and look back on past assignments to observe their progress. Study results also showed students' preference to electronic portfolios as opposed to traditional assessment tests. Electronic portfolios allowed a broader expression of learning, immediate feedback on progress, and more authentic assessment. They also helped document students' growth and "personalized" learning through offering "a relevant personal journey and diverse types of evidence needed when measuring the depth and breadth of their performance" (p. 368).

However, few studies have addressed the emerging issues of electronic portfolio implementation in foreign language learning. For example, Chang (2002) administered an evaluation questionnaire to 35 students in a pre-service teacher education program in order to identify the impact of a web-based portfolio on learning processes and outcomes. Study results revealed that the web-based portfolio system helped students obtain more feedback from their peers than from their teachers. Accordingly, peer feedback became a necessary component of web-based learning activities.

Also, Dhonau and McAlpine (2005) reported the results of a piloted foreign language program that required students to produce a CD-Rom portfolio as part of a second language Methods course. The CD-Rom was part of a package presented during an accreditation review. Although the creation of the CD-Rom was for institutional review, it also led to fostering interaction among the faculty and the students and helped raise standards for better institutional accreditation.

Chang, Wu, and Ku (2005) examined the perceptions of 37 eighth grade Taiwanese students towards introducing electronic portfolios in teaching English as a foreign language. Study results indicated overwhelmingly positive reactions among the participants who hailed the use of this tool in Taiwanese schools.

Similarly, Kocoglu (2008) conducted a descriptive study which investigated the perceptions of Turkish EFL student teachers' perceptions toward using electronic portfolios as a learning tool. The results of student teachers' interviews indicated that electronic portfolios helped the participants collect study material, stay up-to-date with innovations in the digital world, find relevant careers, and support their professional development through working collaboratively. However, a few student teachers underestimated the effectiveness of electronic portfolios for promoting

reflective thinking.

On the other hand, Rossi, Magnoler, Giannandrea (2008) reported that electronic portfolios are effective for enhancing reflection among both teachers and students. The researchers used surveys and quantitative log tracement data to examine 200 electronic portfolios over a three semester period. Study findings indicated that electronic portfolios are useful for promoting adult in-service training. Electronic portfolios helped meet the needs of the participants and provide them with formal and informal recordings of learning activities. However, the researchers cautioned that these benefits might be hampered by lack of motivation, activity overload, and rigid portfolio structures.

Chi-Hua (2008) used electronic portfolios as part of an online writing system that supports non-native students during their writing process. The central premise of that system was that learners need relevant resources when writing in an online environment. Therefore, the proposed system provided students with a friendly supportive writing environment through: 1) writing practice, 2) peer review, and 3) electronic portfolios. This last component included a learning record and a learning journal which students could check and retrieve, both original and revised drafts, for comparison. In this way, students made use of electronic portfolios to reflect on their writing processes and problems.

Finally, Gary (2009) conducted a qualitative study which explored the realistic problems and challenges facing various stakeholders (developers, administrators, students, as well as teachers) during the implementation of an electronic portfolio system in a language center in Hong Kong Polytechnic University. The study offered various suggestions in response to stakeholders' concerns regarding the use of electronic portfolios for: 1) supporting life-long learning, 2) archiving, 3) showcasing

selected artefacts, and 4) recording professional development.

From the above, it is obvious that electronic portfolios are increasingly drawing the attention of EFL researchers and practitioners in various institutions worldwide. As a new tool, its design, development, implementation, and evaluation need to be thoroughly investigated in order to maximize its benefits in foreign language programs.

Learner Autonomy

As explained earlier, a major characteristic of the portfolio is that it is student-centered. In other words, the learner is fully engaged throughout the portfolio development process; that is to say, in the identification, reflection, analysis, and presentation of the artifacts included in this tool. Thus, the learner has to take responsibility for developing his portfolio. Consequently, portfolios have the potential for boosting "learner autonomy" (which has become a buzzword over the last two decades), (Little, 1999, cited in Chiu, 2008). Nowadays, learner autonomy is perceived as "an unquestionable goal and integral part of language learning methodologies throughout the world. Large amounts of time, energy and money are spent on its promotion and implementation" (Reinders, 2000; p. 2).

Learning autonomy also relates to the prevalent paradigm shift which emphasizes the role of the language learner as an active participant who has "a choice as to the what and the how of the curriculum," and at the same time, "should feel responsible for his own learning," (Jacobs and Farrell, 2001).

Learning autonomy refers to "the ability to take charge of one's own learning" (Holec, 1981 cited in Reinders, 2000; p. 3). This ability includes the "capacity for detachment, critical reflection, decision making, and independent action" (Little,

1991; p. 4). Thus, autonomy requires "action" on the part of the learner when he takes responsibility for planning, monitoring, and evaluating his effort. Consequently, autonomous learners "define their goals and create their own learning opportunities" (Nunan, 1997; p. 145). Besides ability and action, consciousness seems to be an important part of the autonomy process. This involves the consciousness of making choices about what to learn and how to learn it and the consciousness of progress, etc. As such, "one cannot make informed choices about what to learn or select appropriate strategies without being conscious of it" (Reinders, 2000; p. 11).

Thus, the term "autonomy" has come to be used in at least five ways: 1) for situations in which learners study entirely on their own; 2) for a set of skills which can be learned and applied in self-directed learning; 3) for an inborn capacity; 4) for the exercise of learners' responsibility for their own learning and; 5) for the right of learners to determine the direction of their own learning (Thanasoulas, 2000).

From this, the autonomous learner takes the initiative in his own learning. He adopts an active role in approaching the learning task, rather than simply reacting to stimuli of the classroom teacher. In other words, "the autonomous learner is not one to whom things merely happen; he is one who, by his own volition, causes things to happen. Learning is seen as the result of his own self-initiated interaction with the world" (Thanasoulas 2000).

The Study

Though writing is a major skill that most EFL programs at Egyptian universities give a high priority, many students encounter serious difficulties when developing standard essays of different genres and rhetorical patterns. Students' incompetence may be partly due to lack of practice and enthusiasm for writing. As a complex and recursive

skill, writing requires steady engagement in appropriate activities in order for the learners to fully experience the various aspects of this discourse. For this reason, this study aims to boost Egyptian college students' writing competence through the incorporation of electronic portfolios into face-to-face instruction. In addition, as a technology-based tool, the electronic portfolio has the potential for enhancing students' learning autonomy. Thus, in order to examine the impact of electronic portfolios on these variables, this study seeks answers to the following questions:

1. What effect does the development and presentation of an electronic portfolio have on

 students' overall writing competence?

2. What effect does the development and presentation of an electronic portfolio have on

 students' learning autonomy?

Method

Sample

This study was conducted on sixty fourth year college students (23 males and 37 females) majoring in English as a foreign language at the College of Education, Tanta University. The participants were randomly assigned to an experimental and a control group, 30 students each. The participants had studied literature, linguistics, as well as various education related topics. As for writing instruction, the participants had been studying the essay as a mandatory subject over the previous three years through which they handled various types of genres; descriptive, narrative, expository, etc.

Accordingly, members of the two groups were required to hand in a portfolio which contained at least five final drafts of different essays handled throughout the term. To this end, members of the experimental group were able to use the Internet to develop their portfolios in on-campus computer labs. Meanwhile, members of the control group developed their paper-based portfolios during traditional face-to-face classrooms wherein they had no access to computer facilities. Finally, the same material, techniques, activities, and strategies were used for the two groups by the same instructor (this investigator) who implemented the process approach throughout this course.

Implementation

The electronic portfolio adopted for use in this study had a learning purpose, (not an assessment one); namely, to help students experience the writing process on their own, through planning, setting objectives, gathering relevant data, carrying out objectives, and reflecting on the writing process through revision and reformulation of the whole piece of writing. Thus, since the main focus of this study was to have students experience writing as a complex and recursive process, the electronic portfolio served as a vehicle for showcasing learning growth relevant to essay writing. Hopefully, this helped support a "sense of ownership" and created "an environment of reflection and collaboration" among the participants (Barrett, 2004).

A Framework for Portfolio Development

Barrett's (2005b) widely acknowledged model for portfolio development was adopted for use in this study. This model comprises two types of skills; a) portfolio skills and b) technology skills. These are explained below:

a) Portfolio Skills

According to this model, the portfolio development process has five stages:

1. Collection: Students gather artifacts (in this case, relevant material to essay writing) that show their successful endeavors and growth opportunities in their day-to-day learning.

2. Selection: Students identify the artifacts which act as evidence in the meeting particular objectives and standards.

3. Reflection: Students evaluate their own progress over time. They review the successes as well as the gaps in the portfolio development process.

4. Projection: Students compare their reflections to particular standards and performance indicators in order to fulfil future learning objectives. In this way, a portfolio becomes a tool for lifelong learning.

5. Presentation Students fulfil their commitment to share their portfolios with the public; peers, friends, or parents. To this end, they store their portfolios in an appropriate medium, e.g., a computer disk, a hard disk, a web server, etc. As a time to celebrate achievement, this stage helps encourage collaboration and development of lifelong learning through the feedback students receive from their peers.

b) Electronic Skills

The second component of Barrett's model for portfolio development required learners to master certain technology skills necessary for functioning within the electronic medium. Acquiring these skills was a prerequisite in order to convert the artifacts into digital format. Among others, learners had to acquire file management skills (i.e., the naming, organizing, attaching, copying and pasting of files). Also, they had to be

familiar with the use of web browsers, e-mail programs, word processing, and concept mapping (Barrett, 2008; p. 19).

To attain such skills, members of the experimental group received necessary training at a computer lab which had an Internet connection, a server, a whiteboard, and a printer. Also, relevant assistance was provided by an experienced computer technician who was on duty to help overcome technical difficulties.

Computer Lab Activities

Members of the experimental group were engaged in the following activities:

1) Getting to know the computer lab: These participants were informed about course objectives, requirements, portfolio concepts, purpose, audience, and format. Also, they were assigned personal accounts and passwords to use when logging onto the computers.

2) Navigating Internet Explorer;

3) Signing Up for a Yahoo Mail Account;

4) Joining a Yahoo Discussion Group: Since reflection is a major component of portfolio development, the participants needed a forum for exchanging views, comments, and feedback with their peers. To this end, the moderator started a free Discussion Group on Yahoo. The use of online discussion group assignments helps "create a secure and nurturing learning environment that appeals to a wide variety of students; and that supports both a sense of collective purpose and individual construction of complex responses" Cobb, 2000; p. 32). Therefore, members of the experimental group had to subscribe to this forum in order to post their drafts and exchange feedback. The participants had to learn how to post files, send an e-mail, respond to a comment, etc. Thus, by the end of the program, the participants had

exchanged more than 334 messages and comments, i.e., about 11 messages per participant. (for more detail about the Discussion Group logon to: http://groups.yahoo.com.group/writingactivities).

5. File Management Skills: Most importantly, the participants were taught how to open, copy, paste and attach files. They were also shown how to organize files into folders which are the major components of the electronic portfolio.

Practicing the Writing Process Online

Adhering to the above model, the participants handled their essays from a process perspective which conceptualises writing as a "recursive" process wherein the learner "jumps between one sub-process and the next, and back and forth within the text…" (Archibald and Jeffery, 2000; p. 2). Adopting this perspective is in full harmony with recent assertions that the incorporation of electronic portfolios is "ideally suited to programs that use a curriculum influenced by the writing process (italics added). Portfolios can accommodate and even support extensive revision … help examine progress over time, and encourage students to take responsibility for their own writing" (Song, and August, 2002; p. 50).

Teaching writing as a process entails five stages; prewriting, drafting, revising, editing, and publishing (Archibald and Jeffery, 2000, Tompkins, 2000, Tsui and Ng, 2000, Jung, 2001, and Carter, 2007). The next section illustrates how members of the experimental group undertook the various stages of the writing process when developing their electronic portfolios.

1 Pre-writing

The participants were engaged in gathering ideas and materials relevant to the topic

through Internet engine searches and information quests. They had to navigate web sites to attain data relevant to their essays. They were required to extensively read whole papers, identify relevant information, and make use of certain pieces when writing their topics, e.g., Sources and Solutions of Environmental Pollution, Advantages and Disadvantages of Life in a Big or in a Small Town, etc.

Yet, a common problem occurred at the beginning of the course; namely, the participants abused the information they acquired through search engines by simply cutting large portions of texts and pasting them into their essays. Due to repeated warnings from the moderator, the participants came gradually to realize how to paraphrase the acquired information into their writing.

2. Drafting

Here, the main focus is on the meaning; that is, putting ideas on paper. Therefore, "mechanics and surface structure such as spelling, punctuation, and sentence structure should not be a concern. This stage is centered on recording ideas" (Carter, 2007; p. 69).

Thus, the participants made use of the information gathered from info-quests to write their first drafts which were posted on the Internet Discussion Group site.

Peer Feedback

As explained earlier, the major intent of starting this Discussion group was to encourage reflection through exchanging feedback with peers. For this reason, each participant had to offer feedback to another classmate once a week. In order to avoid flattery, the participants used pseudonyms when joining the Discussion Group. This was thought to encourage the participants to offer serious and in-depth comments

without evoking feelings of anger or embarrassment, as may have been the case if real names had been used. In reality, only the investigator kept a list of students' real names as well as their pseudonyms, for course evaluation considerations.

At the beginning of the course, most students' feedback focused on surface features and mechanics, e.g., grammatical errors, spelling, and punctuation, even though the participants were frequently reminded that handling such aspects should be postponed to the editing stage.

3. Reviewing

At this stage, the participants were required to go through the content of their writing, looking for improvement. Based on the feedback they received from the instructor and their peers, they had to clarify, add, delete, or even reformulate the whole draft in order to fit the intended purpose, tone, and audience.

A Revision Checklist

The moderator developed a 15 item checklist which was verified by three EFL professors in order for the participants to review their performance when developing their first and second drafts. This checklist addressed all aspects of essay writing; the format, content, organization, development, style, grammar, as well as the mechanics. The checklist was posted on the Group web site so that the participants could easily access it when needed.

4. Editing

This was the time for students to polish their final drafts by examining the mechanics and the surface features; e.g., sentence structure, spelling, punctuation, writing format,

etc. The participants could make use of the spelling and grammar checkers of the Word processing program when editing their essays.

5. Publishing

As a sort of recognition of their writing accomplishments, the participants had to share their topics with their peers through publishing their essays on the group's web page. To do this, the participants had to save their essays into files and then copy and paste these files into a folder entitled My Portfolio. This folder contained five essays which students developed, selected, reflected on, and presented as evidence of their progress throughout this course. A typical student portfolio had to start with a title page that had the student's name, class, academic year, and topic. Next was the content page which contained the students' topics and reflection notes, (for more information about samples of students' electronic portfolios log on to: http://groups.yahoo.com.group/writingactivities.

Instruments

Two instruments were used in this study; the Writing Competence Rating Scale, and the Learner Autonomy Scale. These are highlighted below.

1. Writing Competence Rating Scale

In order to examine the impact of developing the electronic portfolio on students' writing performance, members of the two groups had to take pre-tests and post-tests; the participants had to write a standard five paragraph essay on a) Reasons for Studying English (pre-test) and, b) Qualities in a Friend (post-test). Then, the investigator developed an analytic rating scale to assess students' writing competence.

This scale addressed the writing content, organization, and accuracy.

Face validity of this scale was examined by three EFL professors whose comments and suggestions were adhered to. Then, as suggested by Conor and Mbaye (2002), students' essays were analytically rated by two senior MA candidates who scored students' essays according to three criteria; content, organization, and accuracy. Rating scores ranged from 1 (the lowest) to 4 (the highest). Inter-rater reliability was also verified before rating students' essays; Pearson correlation coefficient alpha was .72; (for more details about this instrument, see Appendix A).

2. The Learner Autonomy Scale

Due to lack of autonomy scales that specifically address the writing process, the investigator carefully examined previous studies which identified characteristics of autonomous language learners (Thanasoulas, 2000, Ushioda and Ridley, 2002, Usuki, 2002, Wu, 2003, and Sert, 2006). Based on findings of these studies, autonomy scales should specifically address learner self directed strategies, their perceptions of the learning process, especially the roles of both the teacher and the learner, and the various resources students access throughout learning. Accordingly, the current 5 point Likert scale has two alternate forms; one form was used as a pre-measure and the other as a post-measure. The autonomy scale comprised the following dimensions; a) use of self directed strategies (items 1-12 in both forms), b) perception of the learning process (items 13-21 in both forms), and c) seeking a variety of learning opportunities (items 22-30 in both forms).

To verify their internal consistency, these autonomy surveys were piloted on 40 non-participating students during the first week of the term. Reliability analysis yielded moderate coefficient alpha scores; .71 and .70 for the pre-and the post-forms,

respectively. Moreover, face validity of the autonomy scales was ratified by three EFL professors whose feedback helped reformulate the dimensions stated above.

Results

Students' responses on the two scales explained above were statistically analysed by administering the ANCOVA test in order to examine the impact of students' electronic portfolios on their writing competence and autonomy. Relevant data for study variables are reported below.

Q.1.What effect does the presentation of electronic portfolios have on students' overall writing competence?

Relevant data of ANCOVA analysis of students' scores for writing competence are provided below.

Table 1: Descriptive Statistics and the ANCOVA Test of Between-Subjects
 Effects; Dependent Variable, Post Overall Writing Competence

Mean		St.D		Source	TypeIII Sum of Squares	Df	Mean Square	F	Sig.	Eta Squared
Exp	Cont	Exp	Cont							
10.1	10.0	1.3	1.1	corrected model	1.134	2	.567	.376	.688	.013
				Intercept	160.972	1	160.972	106.800	.000	.652
				Overall Pre	.930	1	.930	.617	.435	.011
				Group	1.003	1	1.003	.665	.418	.012
				Error	85.911	57	1.507			

				Total	6157.250	60				
				corrected Total	87.046	59				

a Computed using alpha = .05 N = 60

 b R Squared = .013 (Adjusted R Squared = -.022)

Table 1 shows that the means were 10.1 and 10.0; the standard deviations were 1.3 and 1.1 for the experimental and control groups, respectively. The ANCOVA test yielded F (1-58) = .665, p > .o5. Apparently, electronic portfolios had no significant effects on students' overall writing competence.

The Effect of Electronic Portfolio on Learning Autonomy

Q.2: What effect does the presentation of the electronic portfolio have on students' learning autonomy?

Students' responses on the Autonomy Scales were statistically analysed, and the results are reported below.

Table 2: Descriptive Statistics and the ANCOVA Test of Between-Subjects

(Effects; Dependent Variable: Autonomy-POST)

Mean		St. D		Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared
Exp	Cont	Exp	Cont							
98.7	98.4	12.7	9.4	Corrected Model	10.224	2	5.112	.040	.960	.001
				Intercept	7074.024	1	7074.024	55.829	.000	.495
				Autonomy	8.874	1	8.874	.070	.792	.001
				GROUP	2.559	1	2.559	.020	.887	.000
				Error	7222.359	57	126.708			
				Total	590353.000	60				
				Corrected Total	7232.583	59				

a

Computed using alpha

= .05; N = 60

 b R Squared = .001 (Adjusted R Squared = -.034)

In Table 2, the means are 98.7 and 98.4; the standard deviations are 12.7 and 9.4 for the experimental and control groups, respectively. Results of the ANCOVA test are F (1-58) = .020, p > .05; and this indicates no statistically significant differences

between the two groups concerning learning autonomy.

Discussion

The first question of this study examined the effect of the development and presentation of electronic portfolios on students' overall writing competence. As reported above, data analysis revealed that electronic portfolios had no significant effect on this variable. This result is consistent with a myriad of previous research findings which indicated that there is no significant difference in the learning outcomes of students enrolled in web-based instruction and those attending traditional face-to-face classes (Fallah and Ubell, 2000; Johnson, et. al, 2000; Carey, 2001; Green and Gentermann, 2001; Carlisle, 2002; Press, 2005; and Frydenberg, 2007). Along the same lines, Carey (2001) reports that "to this date, most research indicates that there is little difference in the performance of students taking online courses and students taking face-to-face classes." Also, Carnevale (2001) maintains that "the delivery mode we know for a fact does not impact the learning. It is the design of the instruction that impacts the learning, and also what the students bring to the instructional situation."

Thus, Keefe (2003) concludes that

the no significant difference effect is arguably the most enduring phenomenon in the literature. It supports using technology in education, not because it increases teaching effectiveness…but because it is cheaper and more convenient (p. 39).

Yet, several factors might have contributed to this finding. Most importantly, research studies which incorporate online activities are susceptible to several "extraneous variables" (Phipps and Merisotis 1999) which were not within the control

of this study, and might have eroded the impact of electronic portfolios on students' writing competence. According to Lockee (2001), online learning is "a very complex process… There are so many important variables that do impact learning and should be analyzed and considered; e.g. cognitive styles, learning styles, instructional strategies, and different teaching methodologies for teaching particular levels of objectives and different domains" (p. 1). As Felix (2001) maintains, these variables are "the least controllable" in experimental research designs investigating the web (p. 343).

In this study, for example, outside classroom practice, especially for members of the control group who had computers at home, might have been an interfering variable that impacted study results. In other words, it is not unlikely that quite a few participants of the control group used their home Internet connections to gather data through information quests and research engines in order to use when developing their essays in classroom. Though they were frequently warned against such activities, barring these students' outside access to computers was not within the control of the examiner, and this might have contributed to the "no significant effect" on writing competence.

Conversely, lack of computer access among some members of the experimental group might have been a serious impediment that limited their online participation. Though provisions were made for members of the experimental group to use on-campus computer labs, some participants could not afford the time to accomplish their assignments due to schedule overload, and therefore, had to pay for off-campus Internet cafes. Apart from the financial burden, this might have been a serious obstacle, especially for conservative female participants. Thus, as Joffe (2000) states, "inadequate computer/ Internet access renders programs useless" (p. 1).

Another equally important factor that might have led to this "no significant effect" is that students' abuse of technology resources, especially Internet searches, might have destroyed the attainment of significant effects on students' writing competence. According to Brown (2006), "one of the most common roadblocks to the use of digital sources is the indiscriminate copying and pasting of information to students' research papers" (p. 39). As stated earlier in the Implementation section, it was noted that some members of the experimental group stuffed their essays with information they just copied from search engines and pasted into their documents. By so doing, these participants had not yet abandoned the dominant obsolete role of knowledge consumption. Besides, this malpractice runs against the major requirements for effective portfolio development: namely, knowledge construction, reflection, and ownership. To meet these conditions, the learners should have undertaken the painstaking exercise of careful selection and evaluation of resources before adapting relevant data to their documents. As such, it is no wonder then that "many [writing] teachers experience less than satisfactory results from their students. Research papers requiring library and Internet resources for search projects are often superficial in content and lacking in valid conclusion statements" (Brown, 2006; p. 39).

Finally, since developing an electronic portfolio is a time and effort demanding process, it might have been unfeasible to bring about a significant impact in a twelve week period. As Phipps and Merisotis (1999) point out, measuring such effect requires "investigating the whole academic program, not just an individual course" (p. 11).

The second question of this study explored the effect of electronic portfolios on developing students' autonomy. Again, no statistically significant differences between the two groups were reported. This result does not seem at odds with previous

research findings on this issue. As McCarthy (2000) points out, "training in itself does not certainly entail autonomy development among learning; providing the learner with opportunities to practice autonomy both inside and outside classroom is necessary for the effectiveness of autonomy training programs (p.2).

However, this finding could be attributed to various factors. Most prominently, the Egyptian educational context at large seems antithetical to learner autonomy; it is teacher dominated, textbook centered, and exam driven. As such, this system encourages teacher reliance and offers few, if any, opportunities for inquiry and reflection. Therefore, "it is not realistic to expect to achieve autonomous language learning in more teacher dominant contexts…; the majority of students lack necessary critical thinking skills to cope with the requirements of academic life such as the skills to plan, conduct, and evaluate research" (Sert, 2006; p. 185). Again, "given this situation, it is not surprising that students have failed to overtly demonstrate a great deal of autonomy" (Holden and Usuki, 1999; p.191-192).

Besides, the time factor could be accountable for the above finding. Previous research has shown that learner autonomy takes a long time to develop, (Thonasoulas, 2000 and Yumuk, 2002). Therefore, removing some barriers that impede students from acting in certain ways does not necessarily guarantee that they will, once and for all, break away from the old habits of behavior and thinking. Thus, since old habits do not die so fast, a twelve week period might have been inadequate for the participants to abandon their long held learning beliefs and practices which foster teacher dependence, authority control, textbook reliance, rote learning, and memorization of prescribed syllabuses. Again, quitting such learning habits, especially at the very last semester of university instruction, might have been unfeasible in this relatively short period of time.

Also, inability to develop autonomy might be ascribed to "loneliness" which might have hindered students from coping with learning activities in this setting (Reinders, 2000; p.25). It seems that this factor might have been at work in this study where students' were held accountable for the development and presentation of their own portfolios. Yet, to conclude that these students' prefer working in groups rather than working alone in this web-based environment remains an issue which was not explored in this study.

Finally, this result might be attributed to lack of technology-based skills among the participants. As explained earlier, the development of the electronic portfolio is a complex process that requires some basic technology skills (e.g., e-mailing, file management, hyper-linking, etc). Since technology is relatively new to the Egyptian educational arena, the vast majority of the participants were novice computer users, and, therefore, they had to frequently seek the assistance of both the moderator and the technician to cope with course requirements. Based on anecdotal evidence, this might have diminished opportunities of practicing independence and taking charge of learning tasks throughout portfolio preparation. Consequently, instead of focusing on portfolio content, it seems that the participants shifted attention to technology skills. As Barrett (2008) indicated, the focus should "not be on the technology, but on the learning"…and this might have led to "the lowest levels of portfolio implementation [because] content and reflection are more important than technology in implementing electronic portfolios" (p. 9).

Closely related to this is the authoritarian atmosphere prevailing in computer labs, especially on the part of technicians who, out of their undue worry about the computer, did not allow the participants much freedom to experiment with the lab facilities. Again, such an atmosphere is not conducive to promoting learning

autonomy.

Implications and Conclusion

The findings of this study have several implications for the implementation of electronic portfolios in Egyptian educational institutions for both learning and assessment purposes. Most importantly, English language teachers should adopt electronic portfolios as effective means for promoting students' writing competence. Introducing learners to this viable tool enables them to experience hands-on writing activities, especially in the web environment which teems with multimodal online resources that students can use to gather writing input through hyperlinks, cross references, group discussions, and feedback from both peers and teachers. Moreover, the inclusion of portfolios in writing classes has the potential of offering learners authentic opportunities to practice self assessment and a sharing of authority between teacher and student; students can select the work on which they will be evaluated, reflect on their work, seek advice from teachers and peers, and take control of revision. Thus, "evaluation becomes a positive force to encourage growth, maturity, and independence, rather than a means of pointing out differences. A power shift can occur because teacher and students are united in a common effort to improve students' writing instead of adversaries in an unequal contest in which one player (the teacher) controls the outcome from the beginning" (Richardson, 2000; p.120) .

Portfolios can also enhance students' active participation in the EFL classroom. They "can provide students with: a) an opportunity for a more personal and comprehensive relationship between students and teachers, b) a chance for students to know themselves better, i.e., their strengths and weaknesses, and, consequently, monitor their future actions and performances, and c) an opportunity for students to

relate their opinions to those of others, thus helping them to assess several viewpoints, keep an open mind to diversity, and even construct, widen, and reconstruct their own knowledge" (Nunes, 2006; p. 330).

Also, study implications include a shift toward learner autonomy. In order to encourage learners to take more responsibility, current teaching strategies and curricula that promote teacher dependence should be revised, if not abolished. The introduction of autonomy in language learning requires drastic changes in syllabuses, teacher training programs, as well as learners' attitudes. To this end, language programs should shift the emphasis from the "content" to the "processes" of learning, (Nunes, 2006). In other words, rather than focusing on knowledge retention through memorization and rote learning, there should be a shift toward learning strategies that foster self-directed activities and reflective skills; e.g. group activities, self assessment assignments, peer assessment, etc. (Jacobs and Farrell, 2001).

Closely related to this, the activities should require the students to take responsibility for planning, monitoring, and evaluating their own learning. For example, language programs "should introduce task-based learning activities; e.g., group presentations, language games, online discussion groups, e-mail projects…etc. In this way, "teachers can transfer the locus of control to learners and help them become autonomous" (Chiu, 2008).

To conclude, the current study revealed that students' development of online portfolios did not yield significant effects on students' writing competence and learning autonomy. However, these results should be approached with caution due to the relatively short duration of the study as well as to the interference of several extraneous variables that are the least controllable in online research. Therefore, a replication of this study on a full academic year is recommended in order to make

possible generalizations. To this end, future research should combine both quantitative and qualitative techniques "in order to better understand the complex mental processes and strategies involved in electronic portfolio implementation. Also, the perceptions of both learners and teachers of electronic portfolios is another area that is worth examination. Furthermore, future research should address the optimal conditions of classroom management in a high-tech-environment because "not everyone is cut out to teach in this type of classroom" (Mastin, Polman, and Beyer, 2001; p. 65). Therefore, strategies, conditions, and the varied roles of effectively moderating technology-assisted environments entail in-depth investigation. In addition, future research should explore the optimal conditions of employing electronic portfolios to promote learning autonomy relevant to various language skills. Also, as Dornyei, (2001) notes, "little work has been done in the L2 field to devise and test motivational strategies systematically" (p. 51). Therefore, investigating motivational strategies pertinent to foreign language learning is a new and intriguing area. Last, but not least, since technology changes the way we think, research is badly needed to assess the impact of technology on the learner's thinking. Put another way, "since technological tools mediate thought, does this mediation heighten traditional thinking in any way, or does it change the nature of the question of inquiry and expression altogether?" (Gibson and Barrett, 2002; p. 15).

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Appendix A

Writing Competence Rating Scale

Dear Raters;

The following essays were written by a group of EFL college seniors as part of a study undertaken to assess their overall writing competence. You are kindly requested to rate these essays according to the criteria below:

Content:

4: The essay has a clear central idea that directly relates to the assigned topic. It contains an abundance of evidence and details that fully support the topic. All sentences are related to the assigned topic.

3: The essay has a central idea that is reasonably well developed. It contains most details
needed to support the topic with few minor details missing. It also contains very
 few irrelevant sentences.

2: The essay has a central idea that is partially developed. It contains some
details relevant to the assigned topic. Other equally important details are missing.
It also contains several irrelevant sentences

1: The essay has a central idea that is poorly developed. Very few details, if
any, support the topic. Substantive details are missing. Most sentences do not relate
to the assigned topic.

Organization:

4: The essay has a clear plan that contains all major parts of a standard essay; an
introduction, a body, and a conclusion. All paragraphs are logically ordered and
interrelated through appropriate transitions and discourse signals.

3: The essay contains basic parts; yet, it needs a little more elaboration and coherence
 through the use of more accurate transitions and discourse signals.

2: The essay has a plan that is partially coherent. Some paragraph are not logically
ordered and contain few transitions and connectors.

1: The essay does not have a clear plan. Basic parts of a standard essay are missing.
Transitions and discourse signals are nonexistent.

Accuracy:

4: The essay contains no grammatical or mechanical errors. Words, phrases,
and idioms are accurately chosen to address the assigned topic.

3: The essay contains very few grammatical or mechanical errors which do not obscure
the meaning. Most words used are accurate and felicitous.

2: The essay contains some sporadic serious grammatical and mechanical errors which
irritate the reader. The writer uses some words which sound awkward and
monotonous.

1: The essay contains too many serious grammatical and mechanical errors. It also
contains several inaccurate words and phrases which obscure the reader's effort to
comprehend the meaning.

Appendix B

Scale of Writing Autonomy (Form A)

Dear Student;
Please mark one of the following choices where N stands for (never) , R (rarely), S (sometimes), O (often), and A (always).

When writing English,	N	R	S	O	A
1) I know clearly what I am writing about.					
2) I ask someone to thoroughly explain what I should include in my essay.					
3) I make my own way in writing.					
4) I depend on myself to understand what I am going to write about.					
5) On my own, I identify ideas relevant to my essay.					
6) I make use of what I learned before to improve my writing.					
7) I choose the setting relevant for writing on my own.					
8) I start writing only after I look at other people's work.					
9) I decide my own standards, techniques, and procedures.					
10) I try various writing styles that match task requirements.					
11) I question the usefulness, relevance, and accuracy of what I include in my essay.					
12) I analyze what I write in order to make sure that I am handling the task properly.					
13) I revise what I write in order to improve my writing performance.					
14) I depend on myself to identify writing difficulties.					
15) On my own, I seek effective solutions to my writing difficulties.					
16) When I face writing difficulties, I wait till someone offers help.					
17) I ask the instructor to provide me with all bits and pieces I should include in my essay.					
18) I strictly follow the directions dictated by the instructor.					
19) I write about challenging and difficult topics					
20) When I need help, I depend mainly on the instructor.					

21) I ask the instructor to correct every single error I make.					
22) I consider the instructor to be just a facilitator					
23) The instructor decides what we write about; the topic, ideas, the quantity, quality, etc.					
24) The instructor knows best what I should or should not write about.					
25) I fully depend on the instructor to revise my essays in order to identify problems and fix them.					
26) I depend on my colleagues to provide me with relevant writing resources.					
27) I depend on the classroom textbook as the sole source for writing.					
28) I go to the library to gather information relevant to my writing.					
29) Even outside school, I try to obtain relevant writing material.					
30) I use the Internet to search for material I can use in my writing.					

Scale of Writing Autonomy (form B)

Dear Student;
Please mark one of the following choices where N stands for (never) , R (rarely), S (sometimes), O (often), and A (always).

When writing in English,	N	R	S	O	A
1) I am well aware of my objectives.					
2) On my own, I identify the ideas relevant to my essay.					
3) I start writing immediately without waiting for help.					
4) I ask other students to show me what I should write about.					
5) Before I start writing, I read up on several topics relevant to my essay.					
6) I am well aware of various characteristics and requirements of good writing.					
7) I choose certain topics to write different types of essays on my own.					
8) I write on topics that are challenging and difficult, even if I do not					

find enough information					
9) I vary my styles and techniques according to the different writing tasks.					
10) I keep a diary of the effective techniques and procedures I use in my writing.					
11) I decide the relevant place and atmosphere for my writing.					
12 I do my best to include the information I learned in various courses into my essay.					
13) I examine what I write to fit the topic of my essay.					
14) On my own, I carry out necessary changes that help improve my writing.					
15) I depend on myself to identify various types of problems I face in writing.					
16) I develop my own checklist to evaluate my writing performance.					
17) I regularly ask someone to help me figure out writing difficulties.					
18) I consult various writing texts and resources to find effective solutions to my writing difficulties					
19) I depend on my classmates to correct my writing errors.					
20) I ask the instructor to provides me with minute details I need for writing.					
21) I literally follow the directions the instructor provides and write accordingly.					
22) I ask the instructor to correct every single error I make.					
23) I go back to the instructor before I make any changes in my writing.					
24) I ask the instructor just to give me clues about how to improve my topic.					
25) I depend on myself to obtain relevant writing material.					
26) I ask my classmates for basic material I need in writing.					
27) I use only the classroom text to develop my essay.					
28) I try various resources when writing my essay.					

29) I refer to library references for writing material relevant to my essay.					
30) I make use of online resources to develop my essay.					